Read Me First
Router Software 10.0
Site Manager 4.0

Router Software Version 10.0
Site Manager Software Version 4.0

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Bay Networks

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Read Me First

This document supplements the *Release Notes for Router Software Version 10.0*, *Release Notes for Site Manager Software Version 4.0*, and *Known Anomalies: Router Software 10.0 and Site Manager 4.0*.

It contains information about

- Upgrading for Hardware Compression Support
- Using the ASCII Version of the Bay Networks™ MIB
- Configuration file and image file volume locations
- Router Redundancy
- Socket Binding Message with Network Management Systems
- Using the Online Library with Site Manager
- Corrections for router and BNX™ cables
- Change in Diagnostic PROM revision number
- An incorrect reference to *Implementing BayRS Version 10.0 in a Bay Networks Router Environment*
- Support for the **show process cpu** Script
- Router image sizes and Flash card requirements
- Upgrading router software using Quick2Config™

Upgrading for Hardware Compression Support

The information in this section explains how to upgrade a Version 9.0 or 10.0 configuration that already contains an Octal Sync link module to a Version 10.0 configuration that contains an Octal Sync link module equipped with a hardware compression daughterboard.

To upgrade for hardware compression support you must

1. Hot-swap the hardware and use Site Manager in dynamic mode to ensure that the hardware compression driver registers with the router MIB.
2. Modify the Engine Type parameter for the circuit or line.
3. Allocate History Size for the virtual circuits (VCs) that you want to configure for hardware compression.

Hot-Swapping and Registering

To hot-swap and register the hardware:

1. **Use the Version 10.0 image to boot the router containing the Octal Sync link module you plan to replace.**
2. **Hot-swap the Octal Sync link module with the Octal Sync link module equipped with a hardware compression daughterboard.**
3. **Start Site Manager Version 4.0, and select the router containing the new Octal Sync link module.**
4. **Open the Configuration Manager in dynamic mode.**

   The hardware compression driver loads on all slots containing an Octal Sync link module equipped with a hardware compression daughterboard.

Changing the Engine Type Parameter

Depending on your previous configuration, the Engine Type parameter may contain various settings. For example, the configuration file can assign an Engine Type value of “Software” or “Inherit from Line” for each line or for individual circuits on a line. You must change the Engine Type value to “Hardware” for each line or each specific circuit that you want to configure for hardware compression.

When changing the WCP Engine Type parameter, keep the following in mind:

- We recommend setting only your most active lines to use hardware compression.
- You must change the Engine Type parameter value in dynamic mode for it to take effect in the router MIB.
- To change the Engine Type parameter value for the entire line, you must modify the parameter in the WCP Line Interfaces List window.
- To change the Engine Type parameter value for an individual circuit, you must modify the parameter in the WCP Circuit Interfaces List window.

Refer to *Configuring Data Compression Services* for additional information about setting the Engine Type parameter.

History Size Considerations

The existing settings for circuit and line parameters automatically apply when you change the Engine Type parameter. This means that any VC already running software compression, the router uses the existing history size when that VC switches to running hardware compression.

Hardware compression resources are limited. Due to these limitations, we recommend that you carefully consider which VCs you want to configure for hardware compression.

When upgrading for hardware compression, keep the following in mind:

- We recommend setting only your most active lines to use hardware compression.
- Software compression default History Size is 32 KB. Switching to hardware compression, and using these defaults, can consume memory quickly.
- The History Size on the local VC and the remote VC should agree. For example, if you have a 32 KB History Size configured on a local VC, you should also have a 32 KB History Size configured on the remote VC (this also applies to 8 KB History Sizes).
- If the local VC and remote VC have different History Size values, the line negotiates down to use the smaller of these two values.

- On the 32 context hardware compression daughterboard, you can configure up to thirty-one, 8 KB contexts or seven, 32 KB contexts (or various combinations of the two).
- On the 128 context hardware compression daughterboard, you can configure one hundred twenty-seven (127), 8 KB contexts or thirty-one, 32 KB contexts (or various combinations of the two).

Refer to *Configuring Data Compression Services* for additional information about setting the History Size parameter.

Configuration File and Image File Volume Locations

When booting a router that contains the configuration file and image file on separate memory volumes, the configuration file must reside on the higher numbered volume. For example, if the configuration file resides on volume 3 and the image file resides on volume 4, the router does not find the configuration file.

By changing the volume location of the two files (that is, by placing the image file in volume 3 and the configuration file in volume 4), the router boots successfully.

Using the ASCII Version of the Bay Networks MIB

The Bay Networks ASCII MIB file */usr/wf/lib/WFMIB.asn* no longer exists. We have divided the file into several segments, and placed those segments in the appropriate MIB files (such as *ip.mib*, *telnet.mib*, *tokenrng.mib*) in the directory */usr/wf/mibs*.

You can load the MIB files into local MIB browser tools as necessary. However, you must first load the file *wfcommon.mib*; otherwise, errors result.

Router Redundancy

Router Redundancy is a Bay Networks proprietary protocol. It is a multinode protocol, and you use Site Manager differently for Router Redundancy than for other Bay Networks products. When you configure Router Redundancy, do not select local, remote, or dynamic mode for your group and member configuration files. In the main Site Manager Configuration window, select Tools→Router Redundancy→Group Configuration (see *Configuring Interface and Router Redundancy*, page 5-2).

Other critical details of configuring Router Redundancy include:

- Resources are defined as hosts external to the router. Resources are determined by IP address, so all resources must be running TCP/IP.
- A router assumes the primary role according to the following criteria, and considers the criteria in the following order. For example, if two routers in a Router Redundancy group have the same number of active interfaces, the protocol considers the number of reachable resources each router has. But if one router has a larger number of active interfaces, that router becomes primary without consideration of subsequent criteria.

  1. Number of active interfaces
  2. Number of reachable resources
  3. The router's priority to become primary, which you configure.
  4. The router with the lowest Member ID.

- If your backup router is performing network functions and you want the primary router to assume these functions after it switches out of the primary role, both the primary and secondary configuration files for both routers must be identical. The only parameters that are different between the two routers are the primary configuration file name and the Member ID. You must also boot the primary router directly into its primary configuration, and the backup router into its backup configuration, bypassing the bidding process. Failure to do so can result in connection problems related to both routers having the same IP address on a LAN.
- When you enter the primary configuration file name in the Router Redundancy Member Global Parameters Configuration window, be sure to include the Volume ID.
- Ensure that the router contains image files (for example, *bn.exe* or *ace.out*) before it attempts to change roles. If the router changes roles when no image file is available, the router does not boot.

Socket Binding Message with Network Management Systems

The *Release Notes for Site Manager Version 4.0* state that network management systems such as OpenView or SunNet Manager may prevent Site Manager from binding to the SNMP sockets. To solve this problem, you must stop the network management system that is binding to the socket (kill the process ID). Instead, if you want to receive traps in Site Manager, you must first exit from the network management system.

Using the Online Library with Site Manager

Consider the following issues when accessing the Online Library 10.0 CD from Site Manager.

On a PC

Site Manager links in this version of the Online Library do not access the appropriate information for the Site Manager tool. If you access the Online Library from the main window of a Site Manager tool, you will see a screen that identifies the Online Library version. Use the hot links to access the appropriate information.

On an HP 9000

To access the Online Library from Site Manager on an HP 9000, you must add the following lines to the *libcfg.unx* file, after the line that reads *browse=true*.

```
# Use WELLFLEET as the application name when connecting to krsm.
IPCApps=WELLFLEET

# list of databases to search for brief help
WELLFLEET.bh=getstart,hardware,soft10,soft900,kschelp

# list of databases to search for full help
WELLFLEET.fh=getstart,hardware,soft10,soft900,kschelp
```

This file appears in the following directory:

<installation directory>/KRSLIBS/ROUTERS

For example, if you install the library in the directory */usr/krs3*, the *libcfg.unx* file appears in the directory */usr/krs3/KRSLIBS/ROUTERS*.

Corrections for Router and BNX Cables

The *Cable Guide for Routers and BNX Platforms* includes the following corrections:

- Clarification of Terminal Timing Signals
- Correct Pin Assignments for Cable 7932
- Correct Categories for Cables 7932 and 7934

Clarification of Terminal Timing Signals

Throughout the *Cable Guide for Routers and BNX Platforms*, the pinout tables refer to VTT+, VTT-, Terminal Timing+, Terminal Timing-, Terminal Timing A and Terminal Timing B signals. To better understand these signals, apply the following information:

- V preceding the TT (as in VTT+) indicates a V.35 interface
- + is equivalent to A and - is equivalent to B
- + and - are Bay Networks designators
- A and B are network designators

Incorrect Pin Assignments for Cable 7932

On page 7-33, the pinout table for the 50-pin to V.35 standard (Order No. 7932) cable provides incorrect information for the VTT+, Terminal Timing+, and VTT- signals. The following table excerpt shows the correct pinouts:

Bay Networks Termination		**Remote Termination**	
Signal	**Pin # to Pin #**		**Signal**
VTT+	45	U	Terminal Timing+
VTT-	20	W	Terminal Timing-

Correct Categories for Cables 7932 and 7934

Cable 7932, a 50-pin to V.35 standard cable, and 7934, a 50-pin to RS-232 standard cable, correctly appear in Chapter 7 as dial-up services cables. These cables should also appear in Chapter 6 as standard synchronous cables.

Change in 10.0 Diagnostic PROM Revision Number

Bay Networks has changed the revision number for the Version 10.0 Diagnostic PROM, *arediag.ppc*, from Version 1.10 to Version 1.11.

Incorrect Reference to *Implementing BayRS Version 10.0 in a Bay Networks Router Environment*

Upgrading Routers from Version 7–9.xx to Version 10.0 incorrectly references *Implementing BayRS Version 10.0 in a Bay Networks Router Environment* for Flash memory requirements. The Version 10.0 upgrade kit does not include this document. To obtain information regarding the Flash memory requirements, contact the Bay Networks Technical Response Center in your area.

Support for the show process cpu Script

The **show process** *<option>* commands display information about the use of resources (buffers, cpu, memory, lists, and so forth) on the router. The **show process cpu** option is not supported by the FRE®-1. The FRE-1 does not currently contain a timebase with a fine enough resolution to measure CPU use.

Router Image Sizes and Flash Card Requirements

Table 1. shows the Version 10.0 router suite, router software image size, and the Flash card required to accommodate the Version 10.0 router software image. Refer to this table before you upgrade your existing router software to Router Software Version 10.0.

Table 1. Router Image Sizes and Flash Card Requirements

Router Type	Router Suite	Software Image Size	Flash Card Required
AN®	IP Suite	2089 KB	4 MB and 8 MB PCMCIA Flash cards
	Remote office suite	2433 KB	
	Corporate suite	3201 KB	
ASN™	System Suite	3209 KB	4 MB and 8 MB
	LAN Suite	3561 KB	4 MB and 8 MB
	WAN Suite	3313 KB	4 MB and 8 MB
	Corporate Suite	4242 KB	8 MB only
BN®	System Suite	3025 KB	4 MB
	LAN Suite	3377 KB	4 MB
	WAN Suite	3129 KB	4 MB
	Corporate Suite	4209 KB	8 MB only
	ATM Suite	6658 KB	8 MB only
	VNR Suite	7674 KB	8 MB only

Upgrading Router Software Using Quick2Config

This section provides general guidelines for upgrading your existing AN, ASN, or ANH router to Router Software Version 10.0 using Quick2Config. For detailed information about using Quick2Config, refer to *Installing and Getting Started with the Quick2Config Tool* and *Configuring Your Router Using the Quick2Config Tool*.

Perform these steps:

1. **Start the Quick2Config application.**
   a. **Locate the Quick2Config program group icon in the Windows Program Manager window.**
   b. **Double-click the program group icon.**
   c. **Double-click on the Quick2Config application icon.**
2. **Select the Connect to a router on your network option (default).**
3. **Click on OK.**

If the IP address for the router displays in the Connection List, select it. Otherwise, enter the router's IP address in the IP address box.

4. **Transfer the existing** *an.exe* **or** *asn.exe* **image from the router to a PC.**

   Select File→Get from Router→TFTP from the menu bar.

   This ensures that you have a back up of the existing image in case you need it.

   Keep the Quick2Config main window active on your desktop.

5. **Connect to the router using a serial port and a terminal session (for example, terminal emulation using the Terminal application, which is located in the accessories program group on your PC).**

   This establishes a direct console session with the router.

6. **Establish a Technician Interface session.**

   Enter the following command at the Technician Interface prompt:

   Manager

   This is the default setting. If this setting has changed, enter the appropriate login name.

7. **From the Technician Interface prompt, enter**

   dinfo

   This command lists the slots that contain a Flash card.

8. **Locate the Flash card containing the image file (for example, the** *asn.exe* **or** *an.exe* **image file)**

   From the Technician Interface prompt, enter

   dir

9. **Remove the existing router software image from your router.**

   From the Technician Interface prompt, enter

   delete <vol>**:**<filename>

   where:

   <*vol*> is the slot number of the volume containing the file.

   <*filename*> is the name of the file (*an.exe* or *asn.exe*).

10. **Compact the contents of the Flash card.**

    From the Technician Interface, enter

    Compact <vol>:

    where <*vol*> is the slot number of the Flash card.

    You compact the Flash card to ensure that the Flash card contains enough contiguous free space to accommodate the new Version 10.0 software image.

11. **Exit the Technician Interface session by selecting File→Exit.**

12. **Copy the router software image files (***asn.exe* or *an.exe)* **from the CD to your PC.**

13. **Return to the Quick2Config main window.**

14. **Transfer the Version 10.0** *an.exe* **or** *asn.exe* **image files from the PC to the Flash card.**

    Select File→Send to Router→TFTP from the menu bar.

    Be sure to transfer the new Version 10.0 software image to the same slot from which you removed the previous one.

15. **Boot the router with the Version 10.0 image (***an.exe or asn.exe***).**

    Quick2Config boots the router using the specified router software image and configuration file.

    Refer to Configuring Your Router Using the Quick2Config Tool Router for detailed instructions on booting a router using Quick2Config.